

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	John G. CARMAN	Confirmation No.:
Application No.:	Not yet assigned	Group Art Unit:
Filing Date:	Concurrently herewith	Examiner:
For:	METHODS FOR PRODUCING APOMICTIC PLANTS	Attorney Docket No.: 81938-4199

INFORMATION DISCLOSURE STATEMENT

Mail Stop PATENT APPLICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to Applicants' duty of disclosure under 37 C.F.R. § 1.56, enclosed is a Form PTO-1449 containing a total of 86 references for the Examiner's review and consideration. Copies of those references labeled B3, C3, and C78 are enclosed herewith. Copies of the remaining references were previously disclosed by Applicant or cited by the Examiner in the parent applications hereof, those being U.S. Patent Application Serial No. 09/744,614, filed January 26, 2001, and U.S. Patent Application Serial No. 09/576,623, filed May 23, 2000. Copies of the remaining references will be provided if the Examiner so requests.

It is respectfully requested that the references be made of record in this application by the Examiner's completion and return of the enclosed Form PTO-1449. While no representation is made that any of these references may be "prior art" within the meaning of that term under 35 U.S.C. Sections 102 or 103, the enclosed list of references is disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. Section 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the references listed, together with any other references which may have been previously cited by or submitted to the Office, are the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

This Information Disclosure Statement is filed under 37 C.F.R. § 1.97(b), before the latter of three months after the U.S. patent application filing date or the first Office Action on

the merits. Accordingly, no fee or certification is required. Should any fees be required, however, please charge such fees to Winston & Strawn LLP Deposit Account No. 50-1814.

Respectfully submitted,

2/25/04
Date

Rodney J. Fuller
Rodney J. Fuller (Reg. No. 46,714)
For: Allan A. Fanucci (Reg. No. 30,256)

WINSTON & STRAWN LLP

Customer No. 28765

202-371-5904

LIST OF REFERENCES CITED BY APPLICANT Form PTO-1449 <i>(Use several sheets if necessary)</i>	ATTY. DOCKET NO.:	APPLICATION NO.:
	81938-4199	
	APPLICANT: John G. CARMAN	
Sheet 1 of 4	FILING DATE: Concurrently herewith	GROUP:

U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL	CITE NO.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	5,710,637	01/1998	Kindiger et al.	800	200	

OTHER REFERENCES <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>		
C1	Asker and Jerling, Apomixis in Plants, p. 114. 1992.	
C2	Asker and Jerling, Apomixis in Plants, p. 81-107, 241-283. 1992.	
C3	Barcaccia et al. Comparison between isozyme and RAPD analyses to screen aberrant plants in <i>Poa pratensis</i> L. progenies, in Apomixis Newsletter, 7:29-30. 1994.	
C4	Bashaw et al., Apomictic grasses. In: Principles of Cultivar Development Vol. 2, Fehr (ed.), Macmillan Publishing Company, New York, pp. 40-82. 1987	
C5	Bashaw, Apomixis and its Application in Crop Improvement. Hybridization of Crop Plants, Fehr et al. (eds.), American Society of Agronomy and Crop Science Society of America, Madison, pp. 45-63. 1980.	
C6	Bates et al., 1974, Wide Crosses. In: Proceedings of World-wide maize improvement in the 70's and the role of CIMMT, April 22-26 El Batan, Mexico. 7 pp. CIMMT.	
C7	Battaglia, R., 1989. The Evolution of the Female Gametophyte of Angiosperms: an Interpretive Key, <i>Annali di Botanica</i> 47:7-144.	
C8	Baum et al. Wide Crosses in Cereals. <i>Annu. Rev. Plant Physiol. Plant Mol. Biol.</i> , 43:117-43. 1992.	
C9	Bayer, R.J., Evolution of Polyploid Agamic Complexes with Examples from <i>Antennaria</i> (Asteraceae), <i>Opera Botanica</i> 132:53-65 (1996).	
C10	Bell, P.R, Apospory and Apogamy: Implication for Understanding the Plant Life Cycle, <i>International Journal of Plant Sciences</i> 153: S123-S136 (1992).	
C11	Bennett, S.T. et al., Spatial Separation of Ancestral Genomes in the Wild Grass <i>Milium montianum</i> Parl., <i>Annals of Botany</i> 70:111-118 (1992)	
C12	Carman JG, The evolution of gametophytic apomixis, In Batygina (ed) <i>Embryology of Flowering Plants, Vol. 3, The Systems of Reproduction</i> , Russian Acad Sci, St. Petersburg. 230-236. 2000.	
C13	Carman JG. Asynchronous expression of duplicate genes in angiosperms may cause apomixis, bispory, tetraspory, and polyembryony. <i>Biol J. Linnean Soc</i> 61: 51-94. 1997.	
C14	Carman, Evolution of Apomixis in <i>Antennaria</i> (Asteraceae): A Model Involving Hybrid Origins and Karyotypic Stabilization, presented at Plant & Animal Genome XI, The International Conference on the Status of Plant & Animal Genome Research. Town & Country Hotel, San Diego, California. January 11-15, 2003.	
C15	Carman, J.G., Aposporous Apomixis in <i>Schizachyrium</i> (Poaceae:Andropogoneae), <i>Crop Science</i> 2:1252-1255 (1982)	
C16	Carman, J.G., Comparative Histology of Cell Walls During Meiotic and Apomeiotic Megasporogeny in Two Hexaploid Australian <i>Elymus</i> species, <i>Crop Science</i> 31:1526-1532 (1991).	
C17	Carman, J.G., Gametophytic Angiosperm Apomicts and the Occurrence of Polyspory and Polyembryony Among Their Relatives, <i>Apomixis Newsletter</i> 8:39-53 (1995)	
C18	Carman, J.G., Phylogeny of Apomictic, Polysporic and Polyembryonic Angiosperms: Evolutionary and Regulatory Implications, Abstract of a paper presented at the international conference, Harnessing Apomixis, September 25-27, College Station, Texas (1995)	

EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)		
C19	Crane, C.F. et al., Mechanism of Apomixis in <i>Elymus rectisetus</i> from Eastern Australia and New Zealand, <i>American Journal of Botany</i> , Vol. 74, pp.477-496.	
C20	de Wet et al. 1970. Stable triploid hybrids among <i>Zea-Tripsacum-Zea</i> backcross populations. <i>Caryologia</i> 23:183-187.	
C21	De Wet, J.M.J. et al., Gametophytic Apomixis and Evolution in Plants, <i>Taxon</i> 23:689-697 (1974)	
C22	Dung et al., Dissection of a major QTL for photoperiod sensitivity in rice: its association with a gene expresses in an age-dependent manner. <i>Theor. Appl. Genet.</i> Vol. 97, pp. 714-720, 1996.	
C23	Ellerstrom et al., 1977. Sterility and apomictic embryo-sac formation in <i>Raphanobrassica</i> . <i>Hereditas</i> 87:107-120.	
C24	Ellerstrom et al., 1983. Apomictic progeny from <i>Raphanobrassica</i> . <i>Hereditas</i> 99:315.	
C25	Eshed et al., 1996. Less-than-epistatic interactions of quantitative trait loci in tomato. <i>Genetics</i> 143:1807-1817.	
C26	Evans et al. Environmental Control of Reproduction in <i>Themeda Australis</i> , <i>Aust. J. Bot.</i> , 17:375-89. 1969.	
C27	Garcia et al., 2000. Genetic variation in the progeny of maize/ <i>Tripsacum</i> hybrids. <i>Maize Genet. Coop. Newsletter</i> 74:40-41.	
C28	Grimanelli et al, Mapping diplosporous apomixis in tetraploid <i>Tripsacum</i> : one gene or several genes, <i>Heredity</i> 80:33-39. 1998.	
C29	Gustafsson Å. Apomixis in higher plants. III. Biotype and species formation. <i>Lunds Universitets Årsskrift</i> 43: 181-370. 1947.	
C30	Hanna et al., Apomixis: Its identification and use in plant breeding. <i>Crop Science</i> . Vol. 27, pp. 1136-1139. 1987	
C31	Holm et al. 1996. Sexuality and no apomixis found in crossing experiments with diploid <i>Potentilla argentea</i> . <i>Hereditas</i> 125:77-82.	
C32	Hovin et al., Apomixis in Kentucky bluegrass. <i>Crop Science</i> . Vol. 16, pp. 635-638. 1976	
C33	Hussey et al. Influence of photoperiod on the frequency of sexual embryo sacs in facultative apomictic buffelgrass, <i>Euphytica</i> 54:141-145. 1991.	
C34	Jefferson and Bicknell, The potential impacts of apomixis: a molecular genetics approach, in <i>The Impact of Plant Molecular Genetics</i> , Birkhauser, Boston, pp. 88-89, 94, 98). 1996.	
C35	Johri, et al., Comparative Embryology of Angiosperms, Vol. 1, pp. 1-4, 29-41, and 84-94, 1992.	
C36	Kenny et al., A test of the general-purpose genotype hypothesis in sexual and asexual <i>Erigeron</i> species. <i>The American Midland Naturalist</i> , Vol. 136, No. 1, pp. 1-13, 1996.	
C37	Knox, R.B. et al., Experimental Control of Aposporous Apomixis in a Grass of the Andropogoneae, <i>Botanisk Notiser</i> 116:127-141 (1963)	
C38	Knox, R.B., Apomixis: Seasonal and Population Differences in a Grass, <i>Science</i> 157:325-326 (1967)	
C39	Kraft et al. 2000. Linkage disequilibrium and fingerprinting in sugarbeet. <i>Theor. Appl. Genet.</i> 101:323-326.	
C40	Kultunow et al. Apomixis: molecular strategies for the generation of genetically identical seeds without fertilization, <i>Plant Physiol</i> 108: 1345-1352. 1995.	
C41	Leblanc et al. Detection of the apomictic mode of reproduction in maize- <i>Tripsacum</i> hybrids using maize RFLP markers, <i>Theor Appl Genet</i> 90: 1198-1203. 1995.	

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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)		
C42	Leblanc, O. et al., Megasporogenesis and Megagametogenesis in Several Tripsacum species (Poaceae), American Journal of Botany 82:57-63 (1995)	
C43	Leblanc, O. et al., Timing of Megasporogenesis in Tripsacum species (Poaceae) as Related to the Control of Apomixis and Sexuality, Polish Botanical Studies *:75-81 (1994)	
C44	Liu et al. Hybrids and backcross progenies between wheat (<i>Triticum aestivum</i> L.) And apomictic Australian wheatgrass [<i>Elymus rectisetus</i> (Nees in Lehm.) A. Löve & Connor]: karyotypic and genomic analyses, Theor Appl Genet, 89:599-605. 1994.	
C45	Marshall, D.R., et al., The Evolution of Apomixis, Heredity 47:1-15 (1981)	
C46	Mogie, M. A Model for the Evolution and Control of Generative Apomixis, Biological Journal of the Linnean Society 35:127-153 (1988)	
C47	Mogie, The Evolution of Asexual Reproduction in Plants, 139-196. 1992.	
C48	Mujeeb-Kazi, A., Apomictic Progeny Derived from Intergeneric Hordium-Triticum Hybrids, The Journal of Heredity:72-284-285 (1981)	
C49	Mujeeb-Kazi, A., Apomixis in Trigeneric Hybrids of Triticum aestivum/Leymus racemosa/Thinopyrum elongatum, Cytologia 61:15-18 (1996)	
C50	Naumova et al., Apomixis in plants: structural and functional aspects of diplospory in Poa Nemoralis and P. palustris, Protoplasma 208:186-195, 1995.	
C51	Naumova, T.N. et al., Quantitative Analysis of Aposporous Parthenogenesis in Poa pratensis Genotypes, Acta Botanica Neerlandica 42:299-312 (1993)	
C52	Naumova, T.N. et al., Ultrastructural Characteristics of Apospory in Panicum maximum, Sexual Plant Reproduction 8:197-204 (1995)	
C53	Nogler, G.A., Genetics of Gametophytic Apomixis - A Historial Sketch, Polish Botanical Studies 8:5-11 (1994)	
C54	Nordborg, B., Embryological Studies in the Sanguisorba Minor Complex (Rosaceae), Botaniska Notiser 120:109-119 (1967)	
C55	Ozias-Akins, P., et al., Transmissions of the Apomictic Mode of Reproduction in Pennisetum: Co-Inheritance of the Trait and Molecular Markers, Theoretical and Applied Genetics 85:632-638 (1993)	
C56	Ozias-Akins et al. Tight clustering and hemizygoty of apomixis-linked molecular markers in Pennisetum squamulatum implies genetic control of apospory by a divergent locus that may have no allelic form in sexual genotypes, Proc Natl Acad Sci 95: 5127-5132.	
C57	Ozias-Akins, Characterization of the Genomic Region Associated with the Transmission of Apomixis in Pennisetum and Cenchrus, presented at Plant & Animal Genome XI, The International Conference on the Status of Plant & Animal Genome Research. Town & Country Hotel, San Diego, California. January 11-15, 2003.	
C58	Peacock, J., Genetic Engineering and Mutagenesis for Apomixis in Rice, In. Wilson KJ, ed., Proceedings of the International Workshop of Apomixis in Rice, Changsha, China. New York: Rockefeller Foundation 11-22 (1993)	
C59	Peel, M.D. et al., Megasporocyte Callose in Apomictic Buffelgrass, Kentucky Bluegrass, Pennisetum squamulatum Fresen, Tripsacum L., and Weeping Lovegrass, Crop Science, Vol. 37, No. 3	
C60	Peel, M.D. et al., Meiotic Anomalies in Hybrids Between Wheat and Apomictic Elymus rectisetus (Nees in Lehm.) A. Love & Connor, Crop Sci. 37:717-723 (1997)	
C61	Poehlman, Breeding Field Crops, 3 rd Ed., pp. 164-165, 332-339. 1987.	

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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)		
C62	Purnhauser et al., 1993. A method for crossing non-synchronously flowering parents in wheat, using cold storage of the female parent. Cereal Res. Comm. 21(2-3):175-179	
C63	Quarin, Seasonal changes in the incidence of apomixis of iploid, triploid, and tetraploid plants of Paspalum cromoerhizon. Euphytica. Vol. 35, pp. 515-522. (Abstract only) 1986	
C64	Ramula et al. Apomixis for crop improvement, Protoplasma 208: 196-205 (see Abstract and Conclusions). 1999.	
C65	Salisbury et al. Plant Physiology, 4 th Ed., pp. 504-514. 1992.	
C66	Saran et al. 1976. Environmental control of reproduction in Dichanthium intermedium. J. Cytol. Genet. 11:22-28.	
C67	Sharbel et al. Genome-Wide Genetic Variability and DNA Sequence Divergence along an Aneuploid Chromosome Associated with Apomixis in the <i>Arabidopsis thaliana</i> Complex, presented at Plant & Animal Genome XI, The International Conference on the Status of Plant & Animal Genome Research. Town & Country Hotel, San Diego, California. January 11-15, 2003.	
C68	Sherman, R.A. et al., Apomixis in Diploid X Triploid Tripsacum dactyloides hybrids, Genome 34:528-532 (1991)	
C69	Sherwood et al. Inheritance of apospory in buffelgrass, Crop Sci 34:1490-1494. 1994.	
C70	Sherwood. Genetic analysis of apomixis, in Savidan et al. ed., The Flowering of Apomixis: From Mechanisms to Genetic Engineering, D.F.:CIMMYT,IRD,EC DG V1, FAIR, 2001.	
C71	That, New developments in hybrid rice. International Rice Commission Newsletter. Vol. 42, pp. 28-34. (Abstract only) 1993	
C72	Torabinejad et al. Morphology and genome analyses of interspecific hybrids of <i>Elymus scabrus</i> , Génome, 29:150-155. 1987.	
C73	Vielle Calzada, J-P et al., Apomixis: the Asexual Revolution, Science 274:1322-1323 (1996)	
C74	von Bothmer R. et al., Complex Interspecific Hybridization in Barley (<i>Hordium vulgare</i> L and the Possible Occurrence of Apomixis. Theoretical and Applied Genetics, 76:681-690 (1988).	
C75	Zenkter. <i>In Vitro</i> Fertilization and Wide Hybridization in Higher Plants, Critical Reviews in Plant Sciences, 9: 267-279. 1990.	

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